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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/593,424	06/14/2000	Katsuya Irie	1081.1091/JDH	8248

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EXAMINER
LEWIS, DAVID LEE

ART UNIT	PAPER NUMBER
2673	14

DATE MAILED: 09/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/593,424	IRIE ET AL.	
	Examiner	Art Unit	
	David L Lewis	2673	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *25 June 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 U.S.C. □ 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371□ of this title before the invention thereof by the applicant for patent. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. **Claims 1-3, 6, 11, 12, and 21-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Kang. (6400347).**

3. **As in claims 1, 11, 12, and 22 Kang teaches of** a plasma display panel which displays colors by exciting a plurality of fluorescent substances of different colors using ultra-violet rays generated during discharge, **column 1 lines 39-45**, comprising: a drive unit which receives an image signal different colors and drives the panel according to the image signal while decreasing the drive frequency of the sustain discharge as the display load factor increases, **figure 4 item 20, 30, 40, column 4 lines 40-60**, wherein said drive unit makes correction to change the intensity of the image signal of a predetermined color, so that the ratio of an emission intensity of said fluorescent substance of each color during white display is roughly the same when said display load factor is low and high, depending on a change of the display load factor, **column 3 lines 33-44, column 21 lines 10-20, column 22 lines 5-15**. Wherein the drive frequency is decreased based on a brightness detecting means as independently corrected for each of R, G, B, colors, said brightness detecting means having a direct

correspondence to load factor, the adjustments to the R, G, B color intensity each being independently adjusted according to load factor.

4. **As in claim 2 and 25, Kang teaches of** a plasma display panel which displays colors by exciting a plurality of fluorescent substances of different colors using ultra-violet rays generated during discharge, **column 1 lines 39-45,** comprising: a drive unit which drives the panel with decreasing the drive frequency of the sustain discharge as the display load factor increases, **figure 4 item 20, 30, 40, column 4 lines 40-60**, wherein when the display load factor increases, said drive unit makes correction so that the emission intensity of green is decreased or the emission intensity of blue is increased compared with the case when the display load factor is lower, **figure 4 item 20, 30, 40**, **column 4 lines 40-60**. Wherein the drive frequency is decreased based on a brightness detecting means as independently corrected for each of R, G, B, colors, said brightness detecting means having a direct correspondence to load factor, the adjustments to the R, G, B color intensity each being independently increased or decreased according to load factor.

5. **As in claim 3, 24, and 26, Kang teaches of** a plasma display panel which displays colors by exciting a plurality of fluorescent substances of different colors using ultra-violet rays generated during discharge, **column 1 lines 39-45,** comprising: a drive unit which drives the panel with decreasing the drive frequency of the sustain discharge as the display load factor increases, **figure 4 item 20, 30, 40**, **column 4 lines 40-60**, wherein when the display load factor decreases, said drive unit makes correction so that the emission intensity of green is increased, or the emission intensity of blue is decreased compared with the case when the display load factor is higher, **column 4 lines 40-60**. Wherein the drive frequency can be increased or decreased based on a brightness detecting means as independently corrected for each of R, G, B, colors, said brightness detecting means having a direct correspondence to load factor, the

adjustments to the R, G, B color intensity each being independently adjusted according to load factor.

6. **As in claim 6, Kang teaches of** a plasma display panel according to wherein said drive unit monitors a luminance value and/or display area value of each color to be supplied per predetermined unit time, **column 6 lines 1-10**, and corrects said emission intensity of green or blue on the condition that said display load factor increases when the accumulated total of said luminance value and/or display area value per predetermined unit time is higher, **column 6 lines 20-33**, and said display load factor decreases when the accumulated total of said luminance value and/or display area value per predetermined unit time is lower, **column 4 lines 40-60, column 7 lines 63-67, column 8 lines 1-21**. Wherein the brightness detecting means monitors the brightness of each color signal, R, G, and B whereby the color coordinates are measured every sub-field, and depending on the load factor or digital bit weight of the picture data, adjusts the R, G, B, color levels independently, to achieve superior display performance.

7. **As in claims 21 and 23, Kang teaches of** a plasma display panel which displays colors by exciting a plurality of fluorescent substances of different colors using ultra-violet rays generated during discharges comprising; a driver frequency detection unit to detect a drive frequency, **figure 11 item 36**, and adjust output values of a gamma table in a gamma conversion process, **figure 11 item 10**, according to the detected drive frequency, **figure 11 item 36**, so that a ratio of an emission intensity of each of the different colors during a white display is substantially equal regardless of the display load factor, **figure 11 items 30 and 34**.

8. **Claims 11 is rejected under 35 U.S.C. 102(e) as being anticipated by You (6034655).**

9. **As in claim 11, You** teaches of a plasma display panel which displays colors by exciting a plurality of fluorescent substances of different colors using ultra-violet rays generated during discharges, comprising: a drive unit driving the plasma display panel and changing a drive frequency of sustain discharges according to a display load factor to change an emission intensity of one or more of the plurality of fluorescent substances of predetermined colors, so that a ratio of an emission intensity of each of the different colors during a white display is substantially equal regardless of the display load factor, **column 3 lines 42-48, column 4 lines 59-67, and column 5 lines 1-32.**

Claim Rejections - 35 U.S.C. □ 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. **Claims 7-10, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kang (6400347 B1).**

12. **As in claim 7, Kang teaches of** a plasma display panel which display colors by exciting a plurality of fluorescent substances of different colors using ultra-violet rays generated during discharge, **column 1 lines 39-45, column 4 lines 40-60. However Kang does not explicitly** teach of wherein a chromaticity coordinate value during white display is roughly constant regardless the display load which depends on the

luminance and/or display area of the display image. This result of wherein a chromaticity coordinate value during white display remaining constant regardless of the display load **is well within the scope of the invention as taught by Kang and would have been obvious to the skilled artisan** given it is intended to produce this result by independently adjusting the R, G, B, color levels based on the monitored load factor, for the purpose of achieving good white balance, **column 6 lines 1-6**, said color coordinates being eqavalent to "chromaticity coordinate value", wherein this system produces a chromaticity coordinate value during white display that is roughly constant regardless of display load, producing good white balance.

13. **As in claim 8 and 9, Kang teaches of** a plasma display panel which displays colors by exciting a plurality of fluorescent substances of different colors using ultra-violet rays generated during discharge, **column 1 lines 39-45, column 4 lines 40-60, column 6 lines 1-6**. **However Kang does not explicitly** teach of wherein a color temperature value during white display is roughly constant regardless the display load which depends on the luminance and/or display area of the display image nor wherein the deviation from the color temperature curve denoted by the black body radiation curve during white display is roughly constant regardless the display load which depends on the luminance and/or display area of the display image. For the same reasons of obviousness as applied to claim 7 above these features of wherein color temperature value during white display remaining roughly constant and wherein the deviation from the color temperature curve denoted by the black body radiation

curve during white display remaining roughly constant **are well within the scope of the invention as taught by Kang and would have been obvious to the skilled artisan** given the display apparatus capable of adjusting the number of sustaining pulses to achieve good white balance produces these white display features as claimed. For the same reasons of obviousness as applied to claims 7-9, **as in claim 10**, wherein a chromaticity coordinate value during white display is within □0.005uv of the deviation region from the color temperature curve denoted by the black body radiation curve regardless the display load which depends on the luminance and/or display area of the display image, **would have also been obvious to the skilled artisan** given the accuracy of the display system and brightness adjustment means as taught by Kang required to achieve good white balance, **column 6 lines 1-6**, adjusting the R, G, B, color levels independently, to achieve superior display performance, as claimed. **As in claims 13 and 14, Kang it silent** as to said distinction of said respective levels, however Kang implicitly teaches of said distinction whererin as the display load factor increases from first to a second level, the red, blue, and green colors signals are adjusted to obtain good white color balance, **column 4 lines 40-60, column 6 lines 1-6.**

14. **Claims 4, 5, and 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kang (6400347) in view of Nagai (2002/0044105).**

15. **As in claims 4, 15 and 16**, Kang is silent on teaching of detecting power consumption and adjusting the green or blue color based on a load factor and power consumption change. **Nagai advances on the invention** taught by Kang and teaches of adjusting the color sustaining pluses based on power consumption, drive frequency or color temperature, **page 6 paragraph 78, page 9 paragraph 125, page 10 paragraphs 136, 141, 142**. Wherein Nagai identifies the signal with a circuit 4 or 19, determining signal type, and adjusts the drive sequence based on this information. **As in claims 5, 17 and 18**, Nagai detects the drive frequency of the sustain discharges of the plasma display panel and adjusts the emission intensity, page 6 paragraph 79, wherein the identification circuit reads the signal period information and adjusts the display accordingly. **As in claims 19 and 20**, Nagai detects a luminance value and/or a display area value of each color to be supplied per predetermined unit time, and adjusts the emission intensity, page 6 paragraph 79, wherein adjustment is made based on the counted number of horizontal sync signals.

Response to Arguments

Applicant's arguments with respect to claims filed on 6/25/2003 have been considered but are moot in view of the new ground(s) of rejection. See Kang in view of Nagai rejection above.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. 2002/0008679.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **David L. Lewis** whose telephone number is **(703) 306-3026**. The examiner can normally be reached on MT and THF from 8 to 5. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala, can be reached on (703) 305-4938. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:
Commissioner of Patents and Trademarks
Washington, D.C. 20231
or faxed to:
(703) 872-9314 (for Technology Center 2600 only)
Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

BIPIN SHALWALA
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